

Remarks

Claims 1-19 are pending in the application, and each of the claims was rejected. By this paper, claims 1, 8 and 14 have been amended. Consideration of the amended claims, and reconsideration of the remaining claims is respectfully requested.

A. Specification

The paragraph starting on page 4, line 13, included a spelling error which is corrected by this amendment. The paragraph beginning on page 8, line 7, referenced a check valve which was given the label "96". Because the check valve is not visible in any of the drawing figures, the number "96" was deleted, and the words "(not shown)" were inserted.

B. Drawings

The replacement sheet provided with this amendment includes the label "10" that was missing from Figure 1 as originally filed. The label "10" is referenced on page 5, lines 13-14, and throughout the specification.

C. Claim Objections

The Examiner objected to claim 14 because of an informality. Specifically, line 4 contained a misspelled word. The spelling error is corrected by this amendment.

D. Claim Rejections – 35 U.S.C. § 112

The Examiner rejected claims 8-19 under 35 U.S.C. § 112, second paragraph. The Examiner states that in claims 8 and 14, line 6 recites "at least one friction plates," which the Examiner states is confusing. The referenced language was found in claim 8, but not in claim 14. Therefore, pursuant to the Examiner's suggestion, claim 8 is amended by this paper to include the language "at least one friction plate." Claim 14, however, recites "a clutch member having non-rotating friction plates and divider plates," which does not include the objectionable language. Therefore, that portion of claim 14 was not amended.

E. Claim Rejections – 35 U.S.C. § 102

At the outset, it is noted that no new matter has been added by the claim amendments. For example, the “power transfer unit” added to claims 1, 8 and 14 is clearly illustrated in Figure 1 as a planetary gear set 20, which is fully described throughout the specification. In addition, the location of the clutch and the limitation that it does not reduce the engine torque received by the power transfer unit, are described in the text of the specification and/or illustrated in the drawing figures—see, e.g., Specification, page 6, and Figure 1. Therefore, the amendments to the claims are fully supported by the specification as originally filed.

The Examiner rejected claims 1 and 2 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,713,814 (Hara et al.). The Examiner states that Hara et al. discloses a hybrid vehicle drive system that includes “a clutch (Cd) assembly selectively coupled to the generator (5) to selectively augment the reaction torque, thereby cooperating with the generator (5) and capable of controlling the first speed” In addition to referencing the labeled elements shown in the figures, the Examiner also references column 5, lines 17-40, of the Hara et al. patent.

The MPEP states that “‘a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.’” MPEP § 2131, 8th ed., Rev. 1 (citation omitted). The MPEP further states that “‘the identical invention must be shown in as complete detail as is contained in the . . . claim.’” *Id.* (citation omitted). A close examination of Hara et al. reveals that it does not describe, either expressly or inherently, each of the elements found in amended claim 1 and claim 2.

For example, amended claim 1 specifically recites “a clutch assembly having a portion coupled to said generator, and another portion rotationally fixed” The clutch (Cd) described in Hara et al., and referenced by the Examiner, has one portion attached to a ring gear (21) and another portion attached to an output of the motor-generator (5). Thus, the

clutch (Cd) has a portion which may rotate with the ring gear (21) and a portion which may rotate with the motor-generator (5), but does not have a portion that is rotationally fixed. Figure 3 in Hara et al. illustrates a brake (Br) that is disposed between the engine (1) and the power transmission (2). Although there is no specific description in Hara et al. that indicates whether the brake (Br) has a portion that is rotationally fixed, even if it does, it is markedly different from the clutch assembly recited in claim 1 of the present invention. Specifically, claim 1 of the present invention recites a clutch that is specifically "not disposed between the engine and the power transfer unit, so that the engagement of the clutch does not reduce engine torque transferred to the power transfer unit." The brake (Br) in Hara et al., when applied, limits the engine torque transferred to the ring gear (21) and thus to the power transmission (2). This is because the brake (Br) is disposed directly between the engine (1) and the power transmission (2). Thus, the clutch recited in claim 1 of the present invention is markedly different from the clutch (Cd) and the brake (Br). Therefore, claim 1 of the present invention contains elements which are neither expressly, nor inherently, described in Hara et al.

Claim 2 depends directly from amended claim 1, and therefore contains all of the limitations of amended claim 1, as well as additional limitations which further distinguish it from the cited reference. For example, the Examiner states that Hara et al. includes a controller (10) that is "effective to determine the amount of reaction torque required to control the first speed, based upon the amount of reaction torque, to cause the generator (5) and clutch assembly (2) to cooperatively provide the reaction torque." Although Hara et al. does discuss the use of a motor-generator/transmission electronic control unit (10) (Col. 4, ll. 8-9), and further discusses having the torque of the engine (1) reduced by the torque of the motor-generator (5) (Col. 5, ll. 24-28), nowhere does Hara et al. describe that the controller (10) "determine[s] an amount of reaction torque required to control said first speed, and based upon said amount of reaction torque to cause said generator and said clutch assembly to cooperatively provide said reaction torque," as is specifically recited in claim 2 of the present invention. The mere presence of a controller, such as the controller (10) in Hara et al., is not the same as having a controller that is specifically configured to determine an amount of reaction torque, and to control a generator and clutch assembly based upon the amount of the

determined reaction torque. Moreover, even if the controller (10) in Hara et al. is used to specifically control the amount of reaction torque of the motor-generator (5)--and there is no such description in Hara et al.--there is still no indication that the controller (10) first determines an amount of reaction torque required to control engine speed, and then controls the torque of the motor-generator (5) based on this determined reaction torque. Thus, claim 2 contains elements that are neither expressly, nor inherently, found in Hara et al.

F. Claim Rejections – 35 U.S.C. § 103

The Examiner rejected claims 3-7 under 35 U.S.C. § 103(a) as being unpatentable over Hara et al. in view of U.S. Patent No. 6,054,776 (Sumi). The Examiner further rejected claims 8 and 14-19 under 35 U.S.C. § 103(a) as being unpatentable over Hara et al. in view of U.S. Patent No. 6,360,864 (Thomas et al.). The Examiner also rejected claims 9-13 under 35 U.S.C. § 103(a) as being unpatentable over Hara et al. and Thomas et al. as applied to claim 8, and further in view of U.S. Patent No. 3,646,835 (Ito et al.)

The MPEP states that in order to establish *prima facie* obviousness, all of the claim limitations of an invention must be taught or suggested by the prior art. MPEP § 2143.03, 8th ed., Rev. 1. Amended claim 1 is the base claim for each of the claims 3-7, which therefore contain all of the limitations of amended claim 1. Moreover, each of the claims 3-7 contains additional limitations which further distinguish them from the cited art. As discussed above in conjunction with the anticipation rejections, Hara et al. does not describe, either expressly or inherently, all of the limitations found in amended claim 1. Neither does the combination of Hara et al. and Sumi teach or suggest all of the claim limitations of amended claim 1.

The clutch 36 discussed in Sumi is a direct coupling clutch, the same type of clutch as the clutch (Cd) discussed in Hara et al. Specifically, the clutch 36 of Sumi directly couples output from an engine 1 to a motor/generator 2. Thus, the clutch 36 of Sumi does not have a portion which is rotationally fixed, which is a specific limitation of the clutch recited in amended claim 1. Moreover, the clutch 36 in Sumi is disposed between the engine and the

planetary gear set 35, such that an application of the clutch 36 directly limits the torque transferred from the engine 1 to the planetary gear set 35. Thus, the combination of Hara et al. and Sumi does not teach or suggest all of the claim limitations found in amended claim 1. Because each of the claims 3-7 contain all of the limitations of amended claim 1, as well as additional limitations which further distinguish them from the cited art, it is submitted that claims 3-7 are not obvious in light of Hara et al. and Sumi, or any other combination of the cited references.

With regard to claim 8, the Examiner states that Hara et al. lacks the teaching of friction plates and divider plates, but that Thomas et al. teaches a clutch divider plate and friction plates. Nowhere, however, does Hara et al. or Thomas et al. teach or suggest "a clutch assembly having at least one friction plate fixedly coupled to said vehicle and rotationally stationary," as specifically recited in amended claim 8. Moreover, the combination of Hara et al. and Thomas et al. does not teach or suggest a clutch that is not disposed between the engine and a power transfer unit such that engagement of the clutch does not reduce engine torque transferred to the power transfer unit, as specifically recited in amended claim 8. Therefore, the combination of Hara et al. with the clutch divider plate of Thomas et al. does not teach or suggest all of the claim limitations of claim 8 as amended.

A similar analysis can be applied to claim 14 as amended, which includes the limitation "providing a clutch member having non-rotating friction plates" Moreover, amended claim 14, like amended claims 1 and 8, includes the limitation of the clutch not being disposed between the engine and the power transfer unit, so that engagement of the clutch does not reduce engine torque transferred to the power transfer unit. Therefore, the combination of Thomas et al. and Hara et al. does not teach, or even suggest, all of the claim limitations found in amended claim 14. Because claim 14 is the base claim for claims 15-19, each of these claims contains all of the limitations of claim 14. Moreover, claims 15-19 each contain additional limitations which further distinguish them from the cited references. It is therefore submitted that claims 8 and 14-19 are not obvious over Hara et al. in view of Thomas et al.

With regard to claims 9-13, each of these claims has amended claim 8 as its base claim, and therefore includes all of the limitations of amended claim 8. Even with the addition of Ito et al. to the combination of Hara et al. and Thomas et al., all of the claim limitations of amended claim 8 are not taught or suggested by the cited references. Moreover, claims 9-13 each have additional limitations which further distinguish them from the cited references. Therefore, it is submitted that claims 9-13 are not obvious in view of any of the cited references, either alone or in combination. Based on the foregoing, Applicant respectfully submits that claims 1-19 are patentable over the cited references. Accordingly, the allowance of claims 1-19 is requested.

To cover the Petition fee, please charge \$410.00 to Ford Global Technologies, LLC Deposit Account No. 06-1510.

Respectfully submitted,

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